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		U.S. PAT	ENT DOCUMENTS			유 유	33	T
*EXAMINER	DOCUMENT NUMBER	DATE	NAME	CLASS	s	UBCLASS	FAFFROP	AT T
-mil	3,472,931	10/1969	Stoughton		-	<u>- \$</u>	200	\leq
* 1	3,891,757	06/1975	Higuchi	-	-	- 7296	~~	Ü
Sim.	5,270,051	12/1993	Harris	-	1	- 8		
		FOREIGN PA	ATENT DOCUMENTS		•	·		
*EXAMINER	DOCUMENT NUMBER	DATE	COUNTRY	C	CLASS	SUBCLASS	TRANSL	ATION
·mne	WO 93/10244	05/1993	PCT		_		YES	NO
*	1,001,949	08/1965	United Kingdom			_		
d	WO 99/58691	11/18/99	РСТ			-	х	
huy	√ WO 99/51724	10/14/99	PCT			_	х	
	(Includ		REFERENCES e, Date, Pertinent Pages,	Etc.)				
. Wear	Anson, D. S., et al. "Correction of Human Muconolysaccharidasis Type, -V/ Eibroblasta with							
*	Barton, R. W., et al., "The Hurler Corrective Factor," J. Biol. Chem. – 246(24):7773-7779 (1971)							
•	Bielicki, J., et al., "Recombinant Human Iduronate-2-Sulphatase: Correction of Mucopolysaccharidosis-Type II Fibroblasts and Characterization of the Purified Enzyme," Biochem. J. – 289:241-246 (1993)							
	Clements, et al., "Human alpha-L-iduronidase 1. Purification, monoclonal antibody production, native and subunit molecular mass", European Journal of Biochemistry, 152(1):43-49 (1994)							
*	Friedman, T., "Progress Toward Human Gene Therapy," Science - 244:1275-1281 (1989)							
*	Hoogerbrugge, P.M., et al., "Allogeneic Bone Marrow Transplantation for Lysosomal Storage Diseases," Lancet - 345:1398 (1995)							
loannou, Y.A., et al., "Overexpression of Human α-Galactosidase A Results in Its Intracellular Aggregation, Crystallization in Lysosomes, and Selective Secretion," J. Cell Biol 119 (5):1137-1150 (1992)				,- 				
must	Kakkis, et al., "Enzyme-replacement therapy in mucopolysaccharidosis I.," New England Journal of Medicine, 344(3):182-188 (2001)					al of		

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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09/993,241

APPLICANT

Emil Kakkis

FILING DATE

November 13, 2001

APPLICATION NO.

GROUP

1652

) in the second
. Lung	Kakkis, E., et al., "Strong Transcriptional Activation of Translocated C-Myc Genes Occurs Without a Strong Nearby Enhancer or Promoter," Nucleic Acids Res 16 (1):77-96 (1988)
*	Ledley, F.D., "Clinical Application of Somatic Gene Therapy in Inborn Errors of Metabolismot." Inherit. Metab. Dis 13:597-616 (1990)
*	Lowry, R.B., et al. "An Update on the Frequency of Mucopolysaccharide Syndromes in Bright Columbia," <i>Human Genetics</i> - 85:389-390 (1990)
*	Myerowitz, R., et al., "Maturation of α -L-Iduronidase in Cultured Human Fibroblasts," J. Biol. Chem $\underline{256}$ (6):3044-3048 (1981)
*	Moskowitz, S.M., et al., "Cloning and Expression of cDNA Encoding the Human Lysosomal Enzyme, α-L-Iduronidase," <i>FASEB J.</i> – 6:A77 (1992)
*	Nelson, J., "Incidence of the Mucopolysaccharidoses in Northern Ireland," <i>Human Genetics</i> - 101:355-358 (1997)
*	Scriver, C.R., Beaudet, A.L., Sly, W.S. and Valle, D. Eds. <u>The Metabolic Basis of Inherited Disease</u> pp 1565-1587, McGraw Hill, New York (1989)
*	Shull, R.M., et al., "Enzyme Replacement in a Canine Model of Hurler Syndrome," Proc. Natl. Acad. Sci., USA - 91:12937-12941 (1994)
*	Stoltzfus, L.J., <i>et al.</i> , "Cloning and Characterization of cDNA Encoding Canine α-L-Iduronidase," <i>J. Biol. Chem.</i> – <u>267</u> (10):6570-6575 (1992)
*	Taylor, J., et al., "α-L-Iduronidase in Normal and Mucopolysaccharidosis –Type-1 Human Skin Fibroblasts," <i>Biochem J.</i> - 274:263-268 (1991)
*	Tolstoshev, P., et al., "Gene Expression Using Retroviral Vectors," Current Opinions Biotech 1:55-61 (1990)
* 1	Tucker, P.W., et al., "Mouse IgA Heavy Chain Gene Sequence: Implications for Evolution of Immunoglobulin Hinge Exons," <i>Proc. Natl. Acad. Sci. USA</i> - 78 (12):7684-7688 (1981)
.Meel	Unger, E.G., et al., "Recombinant α-L-Iduronidase: Characterization of the Purified Enzyme and Correction of Mucopolysaccharidosis Type I Fibroblasts," <i>Biochem. J.</i> - 304:43-49 (1994)

(Use several sheets if necessary)

PTO FORM 1449

APPLICATION NO.

00800.005T.CNUS03

APPLICATION NO.

09/993,241

APPLICANT

Emil D. KAKKIS

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		U.S. PATE	NT DOCUMENTS					
*EXAMINER	DOCUMENT NUMBER	DATE	NAME	CLASS	s	UBCLASS	FILING D.	_
mo	6,149,909	11/21/2000	Scott, et al.	424	94	.61	11/13/19	98
	6,238,662 B1	5/29/2001	Scott, et al.	424 94.61		.61	8/30/1999	
		FOREIGN PA	TENT DOCUMENTS	- ·				
*EXAMINER	DOCUMENT NUMBER	DATE	COUNTRY		CLASS	SUBCLASS	S TRANSL	ATION
INITIAL		,					YES	NO
nug	WO 97/10353	3/20/1997	PCT		-	_		
	(Includir		REFERENCES Date, Pertinent Pages,	Etc.)				
hug	Kakkis, et al., "Long-Term and High-Dose Trials of Enzyme Replacement Therapy in the Canine Model of Mucopolysaccharidosis I", Biochem. Mol. Med. Vol. 58, No. 2, pp. 156-167 (1996).				ine			
	Neufield, et al., "The Mucopolysaccharidoses", The Metabolic Basis of Inherited Disease, Scriver, C.R., Beaudet, A. L., Sly, W.S., and Valle, D. Eds. McGraw Hill, New York, pp. 1565-1587 (1989).				iver,			
	Rome, et al., "a-L-Iduronidase for Human Kidney" Methods in Enzymology, Vol. 83, pp. 578-582 (1982).					582		
	Schuchman, et al., "Human a-L-Iduronidase: Purification and Properties of the High Uptake (Higher Molecular Weight) and the Low Uptake (Processed) Forms" J. Bio. Chem, Vol. 259, No. 5, pp. 3132-3140 (1984).							
	Scott, et al., "Human a USA Vol. 88, pp. 9695	-L-Iduronidase -9699, (1991).	: cDNA Isolation and E	xpression	ı", <i>Pro</i>	c. Natl. A	Icad. Sci.	
	Scott, et al., "Multiple a Role in Modification pp. 1471-1473 (1993).	Polymorphism of MPS-I Dise	s Within the a-L-Iduron ase Phenotype", Hum. M	idase Ger Iol. Gene	ne (ID) et. Vol	<i>UA)</i> : Imp . 2, No. 9	lications	for
mung	Stoltzfus, et al., "Mucopolysaccharidosis I: cloning and characterization of cDNA encoding canine a-L-Iduronidase", Am. J. Hum. Genet., Vol. 47, No. 3, p. A167, (1990).					nine		

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with **MPEP 609**; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(Use several sheets if necessary)

PTO FORM 1449

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		U.S. PATEN	IT DOCUMENTS					
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<u> </u>								
	(Including		EFERENCES Date, Pertinent Pages,	Etc.)				
ung	Clements, et al., "Immunopurification and characterization of human α-L-iduronidase with the use of monoclonal antibodies", Biochem. J. Vol. 259, pp. 199-208 (1989).						use	
	Kakkis, <i>et al.</i> , "Overexpression of the human lysosomal enzyme α-L-iduronidase in Chinese Hamster Ovary cells", <i>Prot. Exp. Purif.</i> Vol. 5, pp. 225-232 (1994).							
	Scott, et al., "Chromoso Am. J. Hum. Genet. Vol			ıronidase ge	ne (IDUA) to	4p16.3	,,
Zhao, et al., "Carbohydrate structures of recombinant human α-L-iduronidase secreted by Chinese Hamster Ovary cells", J. Biol. Chem. Vol. 273, No. 36, pp. 22758-22765 (1997).					ese			

(Use several sheets if necessary)

PTO FORM 1449

00800.0051.CNUS03	APPLICATION NO. 09/993,241
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